



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/162.103 09/28/98 WINKLER

D 2935/PDC/ICT

APPLIED MATERIALS INC
PATENT COUNSEL MS/2061
3050 BOWERS AVENUE
SANTA CLARA CA 95054

MMC1/0526

EXAMINER

ANDERSON, B

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 05/26/00

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.
09/162,103

Applicant(s)

WINKLER ET. AL.

Examiner
BRUCE ANDERSON

Group Art Unit
2881



- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire THREE month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-17 _____ is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-17 _____ is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claims _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____.
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of References Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2881

DETAILED ACTION

Claim Rejections - 35 U.S.C. § 112

1. Claims 1-17 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

In particular, applicants have not fully disclosed the detection means for an electron microscope in conjunction with said minicolumn. For example, is the electron microscope a TEM or a SEM? Such microscopes have different detectors, which have not been disclosed/shown. Where are the detectors with respect to a turntable stage? Secondly, the load lock mechanism for entry/exit of said specimen from the specimen chamber has not been fully disclosed. Is a load lock present in the embodiments of Figure 7? Thirdly, applicants have not fully disclosed the dimensions of the mini-environment housing/column, nor is it clear what the dimensions of the specimen chamber are. If the specimen chamber is also smaller, it is unclear whether there is clearance for tilting the minicolumn (s). Only dimensions given is with respect to miniature lens means in the last paragraph of page 2, of the application.

Art Unit: 2881

Claim Rejections - 35 U.S.C. § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fink (711) or Kruit (586) in view of Bubeck et. al." Miniature electrostatic lens ...electron probe", as understood.

Fink discloses a low voltage electron source with a foil (13) for forming a minicolumn and attached to a chamber containing a specimen (16), and having detectors (18,19), as seen in Figure

Kruit discloses a similar minicolumn as seen in Figures 5 attached to an electron microscope, having a Schottky emitter, as seen in Figure 1.

Art Unit: 2881

It is obvious to one of ordinary skill in the art that said low voltage electron emitters (Schottky) may be further refined with miniature electrostatic lenses, as taught by the secondary teaching to Bubeck, if so desired.

Art Unit: 2881

Drawings

4. This application is in compliance with the following provisions of the Manual of Patent Examining Procedure (MPEP) for

1. **Correction of Informalities -- 37 CFR 1.85; 1097 O.G. 36**

New formal drawings must be filed with the changes incorporated therein. The art unit number, application number (including series code) and number of drawing sheets should be written on the reverse side of the drawings. Applicant may delay filing of the new drawings until receipt of the "Notice of Allowability" (PTOL-37 or PTO-37). If delayed, the new drawings **MUST** be filed within the **THREE MONTH** shortened statutory period set for reply in the "Notice of Allowability" to avoid extension of time fees.

Extensions of time may be obtained under the provisions of 37 CFR 1.136(a) for filing the corrected drawings (but not for payment of the issue fee). The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

2. **Corrections other than Informalities Noted by Draftsperson on form PTO-948.**

All changes to the drawings, other than informalities noted by the Draftsperson, **MUST** be made in the same manner as above except that, normally, a highlighted (preferably red ink) sketch of the changes to be incorporated into the new drawings **MUST** be approved by

Art Unit: 2881

the examiner before the application will be allowed. No changes will be permitted to be made, other than correction of informalities, unless the examiner has approved the proposed changes.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the three month shortened statutory period set in the "Notice of Allowability" (PTO-37). Within that three month period, two weeks should be allowed for review of the new drawings by the Office. If a correction is determined to be unacceptable by the Office, applicant must arrange to have an acceptable correction re-submitted within the original three month period to avoid the necessity of obtaining an extension of time with extension fees. Therefore, applicant should file corrected drawings as soon as possible.

Failure to take corrective action within the set (or extended) period will result in

ABANDONMENT of the application.

examination purposes only. Formal drawings will be required when the application is allowed.

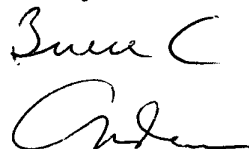
Application/Control Number: 09/162,103

Art Unit: 2881

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Utsumi has been cited to show the use of minicolumns for wafer irradiation (col.3, second paragraph); Hurt to show a data storage device having miniature means with detector; and Feuerbaum and Meisburger, as per specification.
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ex. Anderson whose telephone number is (703) 308-4851.

Bruce C. Anderson
Primary Examiner



BCA

March 3, 2000